FY08 Tactical Plan Status Report for OSG Storage

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FY08 Tactical Plan for OSG Storage

- ## Relevant Strategic Plan(s):
  - FY08-09 Strategic Plan for Data Storage and Caching
  - FY08 Strategic Plan for Grids
  - FY08 Strategic Plan for the Computing Division

- ## Tactical Plan Leader: Ted Hesselroth

- ## Tactical Plan Goals
  - Distribution and installation support of storage software for OSG.
  - Operational support for storage software on OSG.
  - Evaluate new storage software for use by OSG.
  - Provide VO-based opportunistic storage on OSG sites.
  - Provide extensions to storage software for OSG needs.

Activities Summary: FTEs

Level 0 Activity: **OSG**   **% of FY Complete:** **75%**

Personnel Usage (FTEs)

Tactical Plan Level 1 Activity	Allocation		Actual YTD			Current FY08
	FTE-yrs	FTE-mos	FTE-yrs (Ave/mo.)	FTE-mos	% Consumed YTD	Forecast
Open Science Grid						
Extensions	1.68	20.20	2.35	14.10	70%	**0.93**
VDT	1.05	12.60	0.65	3.92	31%	**0.41**
Total	2.73	32.80	3.00	18.02	55%	**0.73**

- Actual Effort = 0.73 X 2.73 FTE = 2.0 FTE
  – Staff used on other projects
- About 0.75 additional available FTE would be needed

Project Activity: Storage Software Support

- **Original Goals [from Tactical Plan]**
  - 1. Contribute data storage and movement software distribution and installation support to the OSG community. Ongoing.
  - 2. Deliver tested storage element and movement software production level releases and patches. Ongoing.
  - 3. Provide and coordinate effective operational support for OSG. Ongoing.
  - 4. Evaluate and support new storage and data movement software. Done.

- **Key Milestones and Metrics**
  1. Handled about 3 new storage tickets per week.
  2. Made about a dozen updates to dCache package and installation scripts.
  3. Wrote test scripts for client functions, replica manager, and space reservation.
  4. Tested new dCache patches on Gridworks cluster, load test with USCD.
  5. Debugged several dCache software issues: replica manager, orphan files, credential caching, client interoperability.
  6. Supported ITB testing for OSG 0.8 and OSG 1.0.
  7. Made and supported several Bestman updates through VDT distribution(LBNL).
  8. Evaluated Bestman/xrootd. Evaluated and made Metronome build of lcg-utils.

Project Activity: Opportunistic Storage

- Original Goals [from Tactical Plan]
  - 1. Provide VO-based opportunistic storage on OSG sites. Not Completed.

- Key Milestones and Metrics
  1. Evaluated Space Reservation capabilities in dCache 1.8 and Bestman.
  2. Had four ITB sites with Storage Elements set up and test Space Reservation.
     - Femigrid, BNL, U of Chicago, LBNL (Bestman)
  3. Recruited five VOs to participate in ITB testing of opportunistic storage(UCSD).
     - ATLAS, CDF, CIGI, SBGrid, SDSS
  4. Continuing to work with VOs on applying opportunistic storage to production.
     - D0
  5. Evaluated Storage Element requirements and job workflow for LIGO.
  6. Gave presentations on opportunistic storage at OSG all-hands and CMS T2 meetings.

Project Activity: Tools and Extensions

- Original Goals [from Tactical Plan]
  - 1. Provide extensions to storage software for OSG needs. Ongoing.

- Key Milestones and Metrics
  1. Created tools framework for dCache based on Python bindings.
  2. Wrote Space Reclaimer(Cornell) and CRC check tools.
  3. Collected tools from OSG sites and provided OSG Storage Operations Toolkit(UCSD).
  4. Wrote Gratia probe for Transactions (Cornell).
  5. Wrote Gratia probe for Available Space (Cornell and UNL).
  6. Negotiated interoperability conventions for Glue Schema 1.3 Storage entries.
  7. Updated GIP scripts for Glue Schema 1.3 (IA and UNL).
  8. Supported ITB testing of Gratia probes and storage GIP(UNL).
  9. Supported/updated gPlazma role-based authorization in dCache.
  10. Contributed Storage Element inputs to XACML Interoperability plan.
  11. Worked with ATLAS on Bestman /xrootd and Bestman RBAC/GUMS support(LBNL).

Tactical Plan Issues and Risks

- **Issues and Risks**
  - Relationship with VOs/User Group.
    - Understanding of functions/relationship within OSG Project Management.
    - Commitment by VOs to maximally exploit OSG capabilities.
  - Software written for major stakeholders (LCG).
    - Formulate non-LCG requirements and work with developers.
  - Quality/Ease-of-Use of Software
    - Maintain expertise in development, debugging, and deployment.
    - Develop long-term plan to improve the quality of software used in OSG.
  - Staffing
    - Coordinate effort levels at monthly Department Meeting.
    - Work on accountability of non-FNAL staff.

Tactical Plan Status Summary

- Status Summary
  - Meeting goals despite only 2.0 out of 2.75 FTEs.
  - Work on robustness/usability is being stretched out.
  - Little effort on issues of previous slide.